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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,430

04/25/2005

Kenji Yamane

OGW-0365

1792

23353 7590 12/28/2006
RADER FISHMAN & GRAUER PLLC
LION BUILDING
1233 20TH STREET N.W., SUITE 501
WASHINGTON, DC 20036

EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/28/2006

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,430	YAMANE, KENJI	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>042505</u> . | 6) <input type="checkbox"/> Other: ____ |

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1) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Shesterkin

3) **Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Shesterkin (US 2,268,344).**

Shesterkin, directed to reducing tread cracking, discloses a pneumatic tire having a circumferential groove wherein ridges ("line portions") are provided at the base of the groove. The ridges are inclined for example at an angle of 45 degrees with respect to the circumferential direction. The ridges have a height less than 0.05 inch (1.27 mm). The groove contains at least 10 ridges per inch (at least one ridge per 2 mm).

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The claimed tire is anticipated by Shesterkin. In claim 1, "line portions provided in a wall face of the groove" reads on and fails to define over the ridges provided in the base of the groove as shown in figure 4 of Shesterkin.

Heinen

4) Claims 1-5 are rejected under 35 U.S.C. 102(a), (b), (e) as anticipated by Heinen (US 6,415,835).

Heinen discloses a pneumatic tire having a tread comprising a circumferential groove wherein both side surfaces of the groove are provided with peaks and valleys such that each valley extends continuously from one side surface to the other side surface. At least half the valleys follow imaginary lines skewed with respect to the median plane extending along the length of the groove by an angle of 45-90 degrees. The depth D1 of the peaks and valleys is 5-15% of the groove width. Preferably, the depth D1 is less than 3 mm. The pitch P1 of the peaks and valleys is less than 40% of the groove width. Preferably, the pitch P1 will be less than 5 mm.

The claimed tire is anticipated by Heinen. The claimed line portions read on the peaks or valleys.

5) Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinen (US 6,415,835).

Claim 1 is considered to be anticipated by Heinen. In any event: it would have been obvious to orient the peaks and valleys ("line portions") in Heinen's circumferential groove such that the peaks and ridges are inclined in one direction with respect to the longitudinal direction (claim 1) at an angle such as 10-60 degrees (claim 2) since

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Heinen suggests inclining the valleys at an angle of 45-90 degrees with respect to the median plane extending in the longitudinal direction to reduce skin friction drag along the groove surface and increase the flow of water from the groove.

As to claim 2, Heinen suggests an angle of 45-90 degrees which overlaps the claimed range of 10-60 degrees.

As to claim 3, it would have been obvious to one of ordinary skill in the art to provide the peaks and valleys with a height of not smaller than 0.3 mm and not more than 20% of each of a width and depth of the groove in view of Heinen's teaching to provide the peaks and valleys with a depth D1 of 5-15% of the groove width / less than 3 mm and a pitch P1 less than 40% of the groove width / less than 5 mm.

As to claim 4, Heinen teaches a pitch P1 of less than 5 mm which overlaps the claimed range of 1.5 to 8.0 mm.

As to claim 5, Heinen discloses 100% of the wall face of the groove being provided with the grooves and valleys. See figure 7.

Remarks

- 6) The remaining references are of interest.
- 7) No claim is allowed.
- 8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

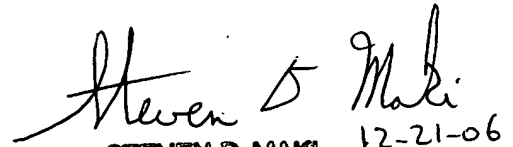
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki
December 21, 2006


STEVEN D. MAKI
PRIMARY EXAMINER
12-21-06